

N4300 SERIES

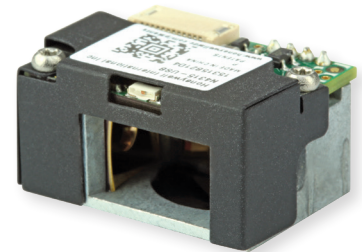
Miniature 1D Scan Engines

From a leading provider of OEM scanning solutions, Honeywell's N4300 Series miniature laser engines offer high levels of performance and reliability for OEM customers and end users.

Designed from the ground up using Honeywell's patented and patent pending technologies, the N4300 Series delivers aggressive bar code scanning performance with a standard form factor and interface. Whether upgrading existing devices or adding a scanning solution to a new application, OEM customers will find that the N4300 Series scan engines are easy to integrate, offering a durable, electrically-grounded metal chassis and standard mounting hole locations.

The TTL version supports full duplex RS232 communication at a higher max baud rate, providing more flexibility and faster data communication than competing products. Using new, advanced Honeywell decoding technologies, poor quality codes may be scanned quickly and easily. Reading errors cost companies time and money. The N4300 Series engines achieve the highest reading accuracy among available laser scanning engines. Unlike competing engines, the N4300 Series brings high performance scanning and unique capabilities to a wide range of applications.

When scanning one bar code that is surrounded by other codes, use the "Smart Pick List" mode to improve targeting accuracy. The N4300 Series is the only laser scan engine that includes built-in object detection for hands-free applications. Both SR (Standard Range) and HD (High Density) versions are available to meet multiple, vertical focus applications.



N4300 Series 2D Scan Engine

The N4300 Series meets strict Honeywell quality standards and is designed to meet a wide range of OEM requirements.

POTENTIAL APPLICATIONS

Mobile computers, scanners, kiosks and other self-service devices.

FEATURES AND BENEFITS



Compact and lightweight, this device delivers a standard form factor and communication for easy integration, even in tight spaces.



Metal chassis provides durability with a grounded metal case, single board design, non-ZIF connector and shock protection up to 2,000 G.



Advanced decoding technology offers lowest misread rate compared to competing laser engines; configurable decoding security levels eliminate costly reading errors on hard-to-read, poor quality barcodes.



"Smart Pick List" mode allows the device to be programmed to read only bar codes found at the center, or any other location, on the scan line, improving targeting accuracy.



Built-in discrete object detection makes history as the first available miniature engine to facilitate hands-free operation, eliminating the cost of adding external object detection on the host.

Honeywell

N4300 SERIES Technical Specifications

TABLE 1. MECHANICAL

CHARACTERISTIC	PARAMETER
DIMENSIONS (H X W X D)	11,8 mm x 21,6 mm x 15,5 mm [0.46 in x 0.85 in x 0.61 in]
WEIGHT	9,1 g [0.32 oz]
INTERFACE	SR N431X: TTL RS232 or USB Full Speed HD N43XX: TTL RS232
CONNECTOR	N430X: 10-pin non-ZIF N431X: 12-pin non-ZIF

TABLE 2. PERFORMANCE

CHARACTERISTIC	PARAMETER
RESOLUTION	SR: 0.102 mm (4 mil) max. HD: 2.5 mil max.
AIMER	650 nm laser diode
LASER CLASS	1
SCAN RATE	SR: 114 ±10 frames/s HD: 108 ±16 frames/s
SCAN ANGLE	SR: standard: 48° ±2°; optional: 35° ±2° HD: standard: 55° ±2°
TILT, PITCH, AND SKEW ANGLES	SR: ±35°, ±60°, ±65° HD: ±35°, ±50°, ±50°
PRINT CONTRAST, MINIMUM	SR: 20 % absolute reflectance HD: 30%
WARRANTY	15-month limited warranty; the warranty period starts at date of shipment from Honeywell to customer

TABLE 3. SR (STANDARD RANGE) READ RANGES (TYPICAL)*

SYMBOLGY	NEAR DISTANCE (MM [IN])	FAR DISTANCE (MM [IN])	DELTA (MM [IN])
4 MIL CODE 39	109 mm [4.3 in]	149 mm [5.9 in]	40 [1.6]
5 MIL CODE 39	94 mm [3.7 in]	201 mm [7.9 in]	107 [4.2]
7.5 MIL CODE 39	68 mm [2.7 in]	305 mm [12.0 in]	237 [9.3]
10 MIL CODE 39	55 mm [2.2 in]	381 mm [15.0 in]	326 [12.8]
13 MIL 100% UPC	52 mm [2.0 in]	457 mm [18 in]	405 [16.0]
15 MIL CODE 39	45 mm [1.77 in]	547 mm [21.5 in]	502 [19.73]
20 MIL CODE 39	43 mm [1.7 in]	680 mm [26.8 in]	637 [25.4]
40 MIL CODE 39	85 mm [3.4 in]	891 mm [35.1 in]	806 [31.7]
55 MIL CODE 39	119 mm [4.7 in]	976 mm [38.4 in]	857 [33.7]

TABLE 4. HD (HIGH DENSITY) READ RANGES (TYPICAL)*

SYMBOLGY	NEAR DISTANCE (MM [IN])	FAR DISTANCE (MM [IN])	DELTA (MM [IN])
3.0 MIL CODES 39	60 mm [2.4 in]	100 mm [3.9 in]	40 [1.5]
3.5 MIL CODES 39	57 mm [2.2 in]	118 mm [4.6 in]	61 [2.4]
4.0 MIL CODE 39	55 mm [2.2 in]	135 mm [5.3 in]	80 [3.1]
5.0 MIL CODE 39	49 mm [1.9 in]	162 mm [6.4 in]	113 [4.5]
7.5 MIL CODE 39	37 mm [1.5 in]	200 mm [7.9 in]	163 [6.4]
10 MIL CODE 39	33 mm [1.3 in]	225 mm [8.9 in]	192 [7.6]
13 100% UPC	35 mm [1.4 in]	232 mm [9.1 in]	197 [7.7]
20 MIL CODE 39	44 mm [1.7 in]	315 mm [12.4 in]	271 [10.7]

TABLE 5. ELECTRICAL

CHARACTERISTIC	PARAMETER
INPUT VOLTAGE	SR N43X3: 3.3 ±10% Vdc SR N43X5: 5.0 ±10% Vdc HD N43XX: 3.3 ±10% Vdc
OPERATING CURRENT	N4313: <100 mA, typ. N4315: <105 mA typ. N4303: <105 mA typ.
SLEEP CURRENT	N4313: <1.5 mA typ. N4315: <1.2 mA typ. N4303: <0.5 mA typ.

TABLE 6. ENVIRONMENTAL

CHARACTERISTIC	PARAMETER
OPERATING TEMPERATURE	20°C to 60°C [-4°F to 140°F]
STORAGE TEMPERATURE	-40°C to 70°C [-40°F to 158°F]
HUMIDITY	5 %RH to 95 %RH, non-condensing
SHOCK	2,000 G for 0.85 ms, mounted on any surface, -20°C to 60°C [-4°F to 140°F]
VIBRATION	Random vibration along each of the X, Y, Z axes for a period of one hour: 0.04 G ² /Hz over 10 Hz to 500 Hz
RF IMMUNITY	10 V/m
ESD PROTECTION	±8 KV indirect discharge
AMBIENT LIGHT IMMUNITY	sunlight: 100,000 lux artificial light: 4,500 lux

* Barcode quality and environmental conditions may affect performance.

TABLE 7. SYMBOLOGIES

LINEAR
Codabar, Code 128, Code 2 of 5, Code 39, Code 93 and 93i, EAN/JAN-13, EAN/JAN 8, IATA Code 2 of 5, Interleaved 2 of 5, Matrix 2 of 5, MSI, GS1 Databar, UPC-A, UPC E, UPC-A/EAN-13 with Extended Coupon Code, Coupon GS1 Code 32(PARAF), EAN-UCC Emulation



IEC 60825-1:2014

WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship during the applicable warranty period. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgment or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items that Honeywell, in its sole discretion, finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While Honeywell may provide application assistance personally, through our literature and the Honeywell website, it is buyer's sole responsibility to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this writing. However, Honeywell assumes no responsibility for its use.

ADDITIONAL INFORMATION

- Integration manual is available upon request; contact your Honeywell representative
- For a listing of common compliance approvals and certifications, please visit our [website](#).

NOTICE

MISUSE OF DOCUMENTATION

- The information presented in this datasheet is for reference only. Do not use this document as a product installation guide
- An installation manual is available by request on our [website](#). Please contact your Honeywell sales representative

FOR MORE INFORMATION

To learn more about Honeywell scan engines and barcode decoding software, visit our [website](#).

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